

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A suction head of a vacuum cleaner, comprising:
 - a head case connected to a cleaner body and having a suction hole on the a bottom surface thereof;
 - a power brush positioned in the head case, some part a portion of which protrudes outward from the head case through the suction hole, the power brush for removing alien substances;
 - a supporting shaft fixed to the head case, the supporting shaft for supporting a rotary motion of the power brush to be in a rotary motion;
 - rotary/linear operating means installed within the power brush between the supporting shaft and an inner portion of the power brush in the power brush, the rotary/linear operating means for rotatively operating and linearly reciprocating the power brush; and
 - cooling fans for cooling the rotary/linear operating means by blowing an air from outside the head case into the power brush while by rotating the moment as the power brush rotates.

2. (Currently Amended) The suction head of claim 1, further comprising a shielding means for separating a channel leading to the an inside of the power brush from a channel leading to the suction hole of the head case.

3. (Currently Amended) The suction head of claim 2, wherein the cylindrical shielding means is installed between a through hole of the head case and apertures formed on both end surfaces of the power brush, and the shielding means is connected to the power brush through a bearing so as to maintain a relative motion therewith.

4. (Currently Amended) The suction head of claim 2, wherein the shielding means is a bellows connected between the head case and a body part portion of the power brush.

5. (Currently Amended) The suction head of claim 1, wherein the apertures connected to the an outside of the head case are formed on both surfaces end portions of the power brush, and the cooling fans are installed in at least one side of the apertures of the power brush.

6. (Currently Amended) The suction head of claim 5, wherein [[the]] an outer ring of the cooling fan is fixed to the power brush ~~in a state where, and wherein~~ the cooling fan is relatively and rotatably supported by the supporting shaft.

7. (Currently Amended) The suction head of claim 5, wherein the cooling fan comprises a hub relatively and rotatably supported by the supporting shaft, the outer ring combined with the power brush, and blades radially connected between the hub and the outer ring, the blades for generating a flow force.

8. (Canceled)

9. (Original) The suction head of claim 1, wherein the cooling fans are formed on both surfaces of the power brush by processing the radial blades.

10. (Currently Amended) The suction head of claim 1, wherein a filter is installed inside a through hole of the head case so as to prevent alien substances from being blown into the head case.

11. (Currently Amended) A suction head of a vacuum cleaner, comprising:

 a head case connected to a cleaner body and having a suction hole on [[the]] a bottom surface thereof;

 a power brush positioned in the head case, ~~some part a portion~~ of which protrudes outward from the head case through the suction hole, the power brush for removing alien substances;

 a supporting shaft fixed to the head case, the supporting shaft for supporting a rotary motion of the power brush ~~to be in a rotary motion~~;

 rotary operating means installed within the power brush between the supporting shaft and an inner portion of the power brush ~~in the power brush~~, the rotary operating means for rotatively operating the power brush; and

 cooling fans for cooling the rotary operating means by blowing ~~an~~ air from outside the head case into the power brush while ~~by~~ rotating the ~~moment~~ as the power brush rotates; and

a shielding means for separating a channel leading to an inside of the power brush from a channel leading to the suction hole of the head case.

12. (Canceled)

13. (Currently Amended) The suction head of claim 11 ~~12~~, wherein the ~~cylindrical~~ shielding means is installed between a through hole of the head case and apertures formed on both end surfaces of the power brush, and wherein the shielding means is connected to the power brush through a bearing so as to ~~be in~~ maintain a relative motion therewith.

14. (Currently Amended) The suction head of claim 11, wherein ~~the~~ apertures connected to ~~the~~ an outside of the head case are formed on both surfaces end portions of the power brush, and the cooling fans are installed in at least one side of the apertures of the power brush.

15. (Currently Amended) The suction head of claim 14, wherein ~~the~~ an outer ring of the cooling fan is fixed to the power brush ~~in a state where,~~ and wherein the cooling fan is relatively and rotatably supported by the supporting shaft.

16. (Currently Amended) The suction head of claim 15, wherein the cooling fan comprises a hub relatively and rotatably supported by the supporting shaft, the outer ring combined with the power brush, and blades radially connected between the hub and the outer ring, the blades for generating a flow force.

17. (Currently Amended) The suction head of claim 11, wherein both ~~side surfaces~~
end portions of the power brush are opened and the cooling fans are installed in [[the]] an inner
center portion of the power brush.

18. (Canceled)

19. (New) A suction head for a vacuum cleaner, comprising:
a case configured to be connected to a cleaner body and having a suction hole on
a surface thereof;
a power brush configured to be positioned in the case such that a portion of the
power brush protrudes through the suction hole;
a supporting mechanism configured to be fixed to the case to support rotary and
linear motion of the power brush;
a rotary/linear operating device configured to rotate and to linearly reciprocate
the power brush; and
cooling fans configured to cool the rotary/linear operating device.

20. (New) The suction head of claim 19, wherein the cooling fans are further configured to rotate as the power brush rotates, and to blow air from outside the case onto the power brush.

21. (New) The suction head of claim 19, wherein the rotary/linear operating device is configured to be installed within the power brush, in an area between the supporting mechanism and an inner portion of the power brush.

22. (New) The suction head of claim 19, further comprising a shielding device configured to separate a channel leading to an inside of the power brush from a channel leading to the suction hole of the case.

23. (New) The suction head of claim 22, further comprising apertures formed on end portions of the power brush, wherein the shielding device is configured to be installed between a through hole of the case and the apertures.

24. (New) The suction head of claim 23, wherein the shielding device comprises a bellows provided between the case and a body portion of the power brush.

25. (New) The suction head of claim 23, wherein the cooling fans are configured to be installed in at least one of the apertures of the power brush.

26. (New) The suction head of claim 19, wherein each cooling fan comprises a hub rotatively installed on the supporting shaft, an outer ring in contact with the power brush, and blades extending radially from the hub to the outer ring and configured to generate an air flow.

27. (New) A suction head for a vacuum cleaner, comprising:
a case configured to be connected to a cleaner body and having a suction hole on a surface thereof;
a power brush configured to be positioned in the case such that a portion of the power brush protrudes through the suction hole;
a supporting mechanism configured to be fixed to the case, and to support a rotary motion of the power brush;
a rotary operating device configured to rotate the power brush; and
cooling fans configured to cool the rotary operating device.

28. (New) The suction head of claim 27, wherein the cooling fans are configured to rotate as the power brush rotates, and to blow air from outside the case into the case.

29. (New) The suction head of claim 27, wherein the rotary operating device is configured to be installed within the power brush, in an area between the supporting mechanism and an inner portion of the power brush.

30. (New) The suction head of claim 27, further comprising a shielding device configured to separate a channel leading to an inside of the power brush from a channel leading to the suction hole of the case.

31. (New) The suction head of claim 30, further comprising apertures formed on end surfaces of the power brush, wherein the shielding device is configured to be installed between a through hole of the case and the apertures.

32. (New) The suction head of claim 31, wherein the cooling fans are configured to be installed in at least one of the apertures of the power brush.

33. (New) The suction head of claim 27, wherein each cooling fan comprises a hub rotatively installed on the supporting shaft, an outer ring in contact with the power brush, and blades extending radially from the hub to the outer ring and configured to generate an air flow.

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34. (New) The suction head of claim 27, wherein both end portions of the power brush are open, and wherein the cooling fans are installed in an inner center portion of the power brush.